

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Anderson 34M-303**

Surface Location: Anderson 34M-HZ Pad Sec.34-T7N-R66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4915.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1439581.87	3204217.40	40.537730	-104.765250	
RKB - 15' WELL @ 4930.0ft (RKB - 15')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 500'FSL, 2433'FEL	7275.0	-4466.6	219.6	Point



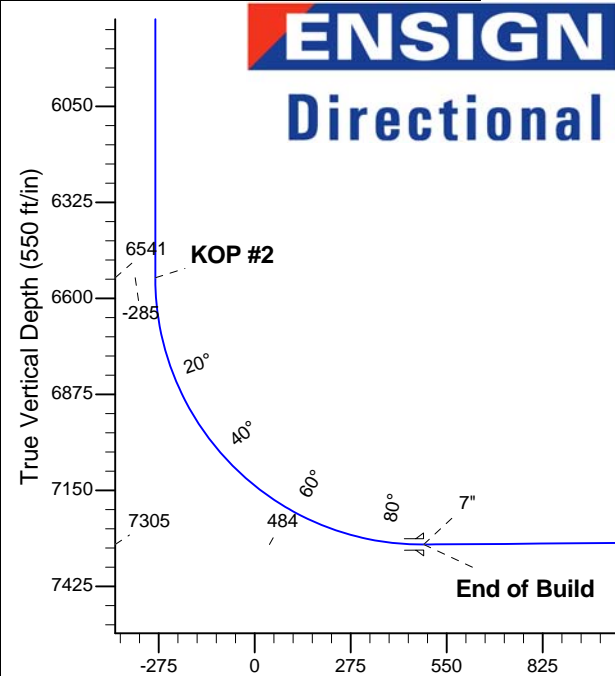
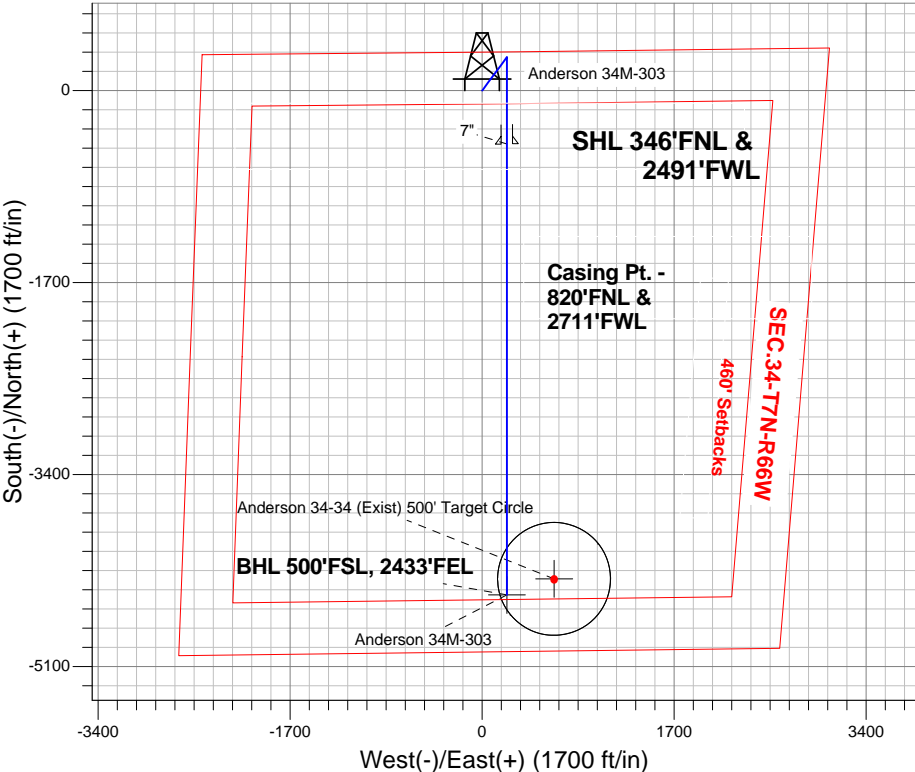
Azimuths to True North
Magnetic North: 8.62°

Magnetic Field
Strength: 53001.3nT
Dip Angle: 67.10°
Date: 5/13/2013
Model: IGRF2010

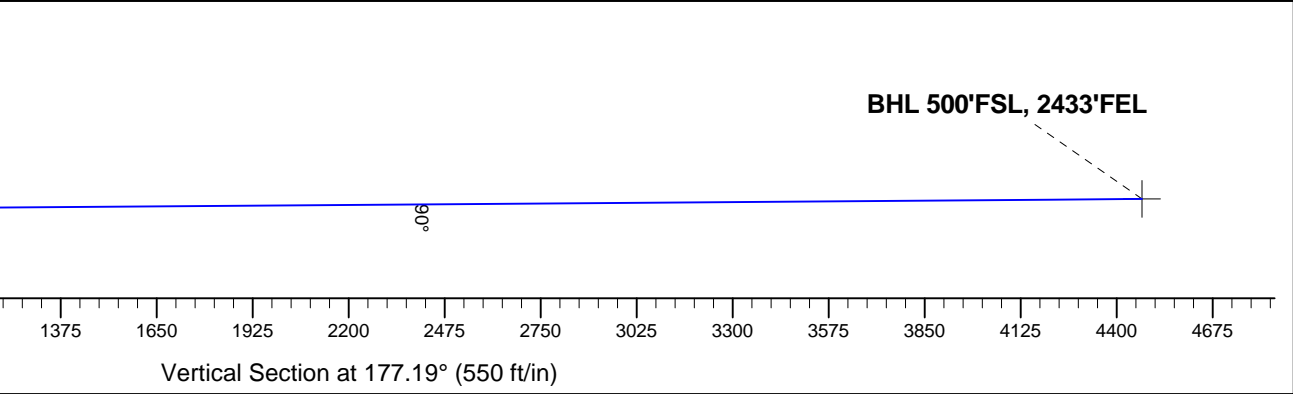
ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	KOP #1
6541.0	6559.8	KOP #2
7305.0	7765.6	End of Build

Anderson 34M-HZ Pad Sec.34-T7N-R66W
Anderson 34M-303
Plan #1 (5-13-13)
17:20, May 14 2013



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1500.6	6.01	36.57	1500.1	12.7	9.4	2.00	36.57	-12.2	
4	4718.2	6.01	36.57	4699.9	283.3	210.2	0.00	0.00	-272.7	
5	5018.8	0.00	0.00	5000.0	296.0	219.6	2.00	180.00	-284.9	
6	6559.8	0.00	0.00	6541.0	296.0	219.6	0.00	0.00	-284.9	
7	7765.6	90.43	180.00	7305.0	-473.7	219.6	7.50	180.00	483.9	
8	11758.6	90.43	180.00	7275.0	-4466.6	219.6	0.00	0.00	4472.0	BHL 500'FSL, 2433'FEL





Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.34-T7N-R66W

Anderson 34M-HZ Pad Sec.34-T7N-R66W

Anderson 34M-303

Wellbore #1

Plan: Plan #1 (5-13-13)

Standard Planning Report

14 May, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-303
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Project	SEC.34-T7N-R66W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		Anderson 34M-HZ Pad Sec.34-T7N-R66W			
Site Position:		Northing:	1,439,581.87 ft	Latitude:	40.537730
From:	Lat/Long	Easting:	3,204,217.40 ft	Longitude:	-104.765250
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.47 °

Well	Anderson 34M-303					
Well Position	+N/-S	0.0 ft	Northing:	1,439,581.87 ft	Latitude:	40.537730
	+E/-W	0.0 ft	Easting:	3,204,217.40 ft	Longitude:	-104.765250
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,915.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/13/2013	8.62	67.10	53,001

Design	Plan #1 (5-13-13)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	177.19

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.6	6.01	36.57	1,500.1	12.7	9.4	2.00	2.00	0.00	36.57	
4,718.2	6.01	36.57	4,699.9	283.3	210.2	0.00	0.00	0.00	0.00	
5,018.8	0.00	0.00	5,000.0	296.0	219.6	2.00	-2.00	0.00	180.00	
6,559.8	0.00	0.00	6,541.0	296.0	219.6	0.00	0.00	0.00	0.00	
7,765.6	90.43	180.00	7,305.0	-473.7	219.6	7.50	7.50	0.00	180.00	
11,758.6	90.43	180.00	7,275.0	-4,466.6	219.6	0.00	0.00	0.00	0.00	BHL 500'FSL, 2433

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Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
Anderson 34-34 (Exist) 500' Target Circle									
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
1,240.0	0.80	36.57	1,240.0	0.2	0.2	-0.2	2.00	2.00	0.00
1,280.0	1.60	36.57	1,280.0	0.9	0.7	-0.9	2.00	2.00	0.00
1,320.0	2.40	36.57	1,320.0	2.0	1.5	-1.9	2.00	2.00	0.00
1,360.0	3.20	36.57	1,359.9	3.6	2.7	-3.5	2.00	2.00	0.00
1,400.0	4.00	36.57	1,399.8	5.6	4.2	-5.4	2.00	2.00	0.00
1,440.0	4.80	36.57	1,439.7	8.1	6.0	-7.8	2.00	2.00	0.00
1,480.0	5.60	36.57	1,479.6	11.0	8.1	-10.6	2.00	2.00	0.00
1,500.6	6.01	36.57	1,500.1	12.7	9.4	-12.2	2.00	2.00	0.00
1,520.0	6.01	36.57	1,519.3	14.3	10.6	-13.7	0.00	0.00	0.00
1,560.0	6.01	36.57	1,559.1	17.7	13.1	-17.0	0.00	0.00	0.00
1,600.0	6.01	36.57	1,598.9	21.0	15.6	-20.2	0.00	0.00	0.00
1,640.0	6.01	36.57	1,638.7	24.4	18.1	-23.5	0.00	0.00	0.00
1,680.0	6.01	36.57	1,678.5	27.7	20.6	-26.7	0.00	0.00	0.00
1,720.0	6.01	36.57	1,718.2	31.1	23.1	-29.9	0.00	0.00	0.00
1,760.0	6.01	36.57	1,758.0	34.5	25.6	-33.2	0.00	0.00	0.00
1,800.0	6.01	36.57	1,797.8	37.8	28.1	-36.4	0.00	0.00	0.00
1,840.0	6.01	36.57	1,837.6	41.2	30.6	-39.7	0.00	0.00	0.00
1,880.0	6.01	36.57	1,877.4	44.6	33.1	-42.9	0.00	0.00	0.00
1,920.0	6.01	36.57	1,917.1	47.9	35.6	-46.1	0.00	0.00	0.00
1,960.0	6.01	36.57	1,956.9	51.3	38.1	-49.4	0.00	0.00	0.00

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Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,000.0	6.01	36.57	1,996.7	54.7	40.6	-52.6	0.00	0.00	0.00
2,040.0	6.01	36.57	2,036.5	58.0	43.1	-55.8	0.00	0.00	0.00
2,080.0	6.01	36.57	2,076.3	61.4	45.6	-59.1	0.00	0.00	0.00
2,120.0	6.01	36.57	2,116.0	64.8	48.0	-62.3	0.00	0.00	0.00
2,160.0	6.01	36.57	2,155.8	68.1	50.5	-65.6	0.00	0.00	0.00
2,200.0	6.01	36.57	2,195.6	71.5	53.0	-68.8	0.00	0.00	0.00
2,240.0	6.01	36.57	2,235.4	74.9	55.5	-72.0	0.00	0.00	0.00
2,280.0	6.01	36.57	2,275.2	78.2	58.0	-75.3	0.00	0.00	0.00
2,320.0	6.01	36.57	2,314.9	81.6	60.5	-78.5	0.00	0.00	0.00
2,360.0	6.01	36.57	2,354.7	85.0	63.0	-81.8	0.00	0.00	0.00
2,400.0	6.01	36.57	2,394.5	88.3	65.5	-85.0	0.00	0.00	0.00
2,440.0	6.01	36.57	2,434.3	91.7	68.0	-88.2	0.00	0.00	0.00
2,480.0	6.01	36.57	2,474.1	95.0	70.5	-91.5	0.00	0.00	0.00
2,520.0	6.01	36.57	2,513.8	98.4	73.0	-94.7	0.00	0.00	0.00
2,560.0	6.01	36.57	2,553.6	101.8	75.5	-97.9	0.00	0.00	0.00
2,600.0	6.01	36.57	2,593.4	105.1	78.0	-101.2	0.00	0.00	0.00
2,640.0	6.01	36.57	2,633.2	108.5	80.5	-104.4	0.00	0.00	0.00
2,680.0	6.01	36.57	2,673.0	111.9	83.0	-107.7	0.00	0.00	0.00
2,720.0	6.01	36.57	2,712.7	115.2	85.5	-110.9	0.00	0.00	0.00
2,760.0	6.01	36.57	2,752.5	118.6	88.0	-114.1	0.00	0.00	0.00
2,800.0	6.01	36.57	2,792.3	122.0	90.5	-117.4	0.00	0.00	0.00
2,840.0	6.01	36.57	2,832.1	125.3	93.0	-120.6	0.00	0.00	0.00
2,880.0	6.01	36.57	2,871.9	128.7	95.5	-123.9	0.00	0.00	0.00
2,920.0	6.01	36.57	2,911.6	132.1	98.0	-127.1	0.00	0.00	0.00
2,960.0	6.01	36.57	2,951.4	135.4	100.5	-130.3	0.00	0.00	0.00
3,000.0	6.01	36.57	2,991.2	138.8	103.0	-133.6	0.00	0.00	0.00
3,040.0	6.01	36.57	3,031.0	142.2	105.5	-136.8	0.00	0.00	0.00
3,080.0	6.01	36.57	3,070.8	145.5	108.0	-140.0	0.00	0.00	0.00
3,120.0	6.01	36.57	3,110.5	148.9	110.5	-143.3	0.00	0.00	0.00
3,160.0	6.01	36.57	3,150.3	152.3	113.0	-146.5	0.00	0.00	0.00
3,200.0	6.01	36.57	3,190.1	155.6	115.5	-149.8	0.00	0.00	0.00
3,240.0	6.01	36.57	3,229.9	159.0	118.0	-153.0	0.00	0.00	0.00
3,280.0	6.01	36.57	3,269.7	162.4	120.4	-156.2	0.00	0.00	0.00
3,320.0	6.01	36.57	3,309.4	165.7	122.9	-159.5	0.00	0.00	0.00
3,360.0	6.01	36.57	3,349.2	169.1	125.4	-162.7	0.00	0.00	0.00
3,400.0	6.01	36.57	3,389.0	172.4	127.9	-166.0	0.00	0.00	0.00
3,440.0	6.01	36.57	3,428.8	175.8	130.4	-169.2	0.00	0.00	0.00
3,480.0	6.01	36.57	3,468.6	179.2	132.9	-172.4	0.00	0.00	0.00
3,520.0	6.01	36.57	3,508.3	182.5	135.4	-175.7	0.00	0.00	0.00
3,560.0	6.01	36.57	3,548.1	185.9	137.9	-178.9	0.00	0.00	0.00
3,600.0	6.01	36.57	3,587.9	189.3	140.4	-182.1	0.00	0.00	0.00
3,640.0	6.01	36.57	3,627.7	192.6	142.9	-185.4	0.00	0.00	0.00
3,680.0	6.01	36.57	3,667.5	196.0	145.4	-188.6	0.00	0.00	0.00
3,720.0	6.01	36.57	3,707.2	199.4	147.9	-191.9	0.00	0.00	0.00
3,760.0	6.01	36.57	3,747.0	202.7	150.4	-195.1	0.00	0.00	0.00
3,800.0	6.01	36.57	3,786.8	206.1	152.9	-198.3	0.00	0.00	0.00
3,840.0	6.01	36.57	3,826.6	209.5	155.4	-201.6	0.00	0.00	0.00
3,880.0	6.01	36.57	3,866.4	212.8	157.9	-204.8	0.00	0.00	0.00
3,920.0	6.01	36.57	3,906.1	216.2	160.4	-208.1	0.00	0.00	0.00
3,960.0	6.01	36.57	3,945.9	219.6	162.9	-211.3	0.00	0.00	0.00
4,000.0	6.01	36.57	3,985.7	222.9	165.4	-214.5	0.00	0.00	0.00
4,040.0	6.01	36.57	4,025.5	226.3	167.9	-217.8	0.00	0.00	0.00
4,080.0	6.01	36.57	4,065.3	229.7	170.4	-221.0	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,120.0	6.01	36.57	4,105.0	233.0	172.9	-224.2	0.00	0.00	0.00
4,160.0	6.01	36.57	4,144.8	236.4	175.4	-227.5	0.00	0.00	0.00
4,200.0	6.01	36.57	4,184.6	239.8	177.9	-230.7	0.00	0.00	0.00
4,240.0	6.01	36.57	4,224.4	243.1	180.4	-234.0	0.00	0.00	0.00
4,280.0	6.01	36.57	4,264.2	246.5	182.9	-237.2	0.00	0.00	0.00
4,320.0	6.01	36.57	4,303.9	249.8	185.4	-240.4	0.00	0.00	0.00
4,360.0	6.01	36.57	4,343.7	253.2	187.9	-243.7	0.00	0.00	0.00
4,400.0	6.01	36.57	4,383.5	256.6	190.4	-246.9	0.00	0.00	0.00
4,440.0	6.01	36.57	4,423.3	259.9	192.8	-250.2	0.00	0.00	0.00
4,480.0	6.01	36.57	4,463.1	263.3	195.3	-253.4	0.00	0.00	0.00
4,520.0	6.01	36.57	4,502.8	266.7	197.8	-256.6	0.00	0.00	0.00
4,560.0	6.01	36.57	4,542.6	270.0	200.3	-259.9	0.00	0.00	0.00
4,600.0	6.01	36.57	4,582.4	273.4	202.8	-263.1	0.00	0.00	0.00
4,640.0	6.01	36.57	4,622.2	276.8	205.3	-266.3	0.00	0.00	0.00
4,680.0	6.01	36.57	4,662.0	280.1	207.8	-269.6	0.00	0.00	0.00
4,718.2	6.01	36.57	4,699.9	283.3	210.2	-272.7	0.00	0.00	0.00
4,720.0	5.98	36.57	4,701.7	283.5	210.3	-272.8	2.00	-2.00	0.00
4,760.0	5.18	36.57	4,741.5	286.6	212.6	-275.8	2.00	-2.00	0.00
4,800.0	4.38	36.57	4,781.4	289.3	214.6	-278.4	2.00	-2.00	0.00
4,840.0	3.58	36.57	4,821.3	291.5	216.3	-280.5	2.00	-2.00	0.00
4,880.0	2.78	36.57	4,861.2	293.3	217.6	-282.3	2.00	-2.00	0.00
4,920.0	1.98	36.57	4,901.2	294.6	218.6	-283.5	2.00	-2.00	0.00
4,960.0	1.18	36.57	4,941.2	295.5	219.2	-284.4	2.00	-2.00	0.00
5,000.0	0.38	36.57	4,981.2	296.0	219.6	-284.8	2.00	-2.00	0.00
5,018.8	0.00	0.00	5,000.0	296.0	219.6	-284.9	2.00	-2.00	0.00
5,040.0	0.00	0.00	5,021.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,080.0	0.00	0.00	5,061.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,120.0	0.00	0.00	5,101.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,160.0	0.00	0.00	5,141.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,181.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,240.0	0.00	0.00	5,221.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,280.0	0.00	0.00	5,261.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,320.0	0.00	0.00	5,301.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,360.0	0.00	0.00	5,341.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,381.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,440.0	0.00	0.00	5,421.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,480.0	0.00	0.00	5,461.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,520.0	0.00	0.00	5,501.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,560.0	0.00	0.00	5,541.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,581.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,640.0	0.00	0.00	5,621.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,680.0	0.00	0.00	5,661.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,720.0	0.00	0.00	5,701.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,760.0	0.00	0.00	5,741.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,781.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,840.0	0.00	0.00	5,821.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,880.0	0.00	0.00	5,861.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,920.0	0.00	0.00	5,901.2	296.0	219.6	-284.9	0.00	0.00	0.00
5,960.0	0.00	0.00	5,941.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,981.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,040.0	0.00	0.00	6,021.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,080.0	0.00	0.00	6,061.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,120.0	0.00	0.00	6,101.2	296.0	219.6	-284.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-303
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,160.0	0.00	0.00	6,141.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,181.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,240.0	0.00	0.00	6,221.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,280.0	0.00	0.00	6,261.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,320.0	0.00	0.00	6,301.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,360.0	0.00	0.00	6,341.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,381.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,440.0	0.00	0.00	6,421.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,480.0	0.00	0.00	6,461.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,520.0	0.00	0.00	6,501.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,559.8	0.00	0.00	6,541.0	296.0	219.6	-284.9	0.00	0.00	0.00
KOP #2									
6,560.0	0.00	180.00	6,541.2	296.0	219.6	-284.9	0.00	0.00	0.00
6,600.0	3.01	180.00	6,581.2	294.9	219.6	-283.8	7.53	7.53	0.00
6,640.0	6.01	180.00	6,621.0	291.8	219.6	-280.7	7.50	7.50	0.00
6,680.0	9.01	180.00	6,660.7	286.6	219.6	-275.4	7.50	7.50	0.00
6,720.0	12.01	180.00	6,700.0	279.3	219.6	-268.2	7.50	7.50	0.00
6,760.0	15.01	180.00	6,738.9	269.9	219.6	-258.8	7.50	7.50	0.00
6,800.0	18.01	180.00	6,777.3	258.6	219.6	-247.5	7.50	7.50	0.00
6,840.0	21.01	180.00	6,815.0	245.2	219.6	-234.1	7.50	7.50	0.00
6,880.0	24.01	180.00	6,851.9	229.9	219.6	-218.8	7.50	7.50	0.00
6,920.0	27.01	180.00	6,888.0	212.7	219.6	-201.6	7.50	7.50	0.00
6,960.0	30.01	180.00	6,923.1	193.6	219.6	-182.6	7.50	7.50	0.00
7,000.0	33.01	180.00	6,957.2	172.7	219.6	-161.7	7.50	7.50	0.00
7,040.0	36.01	180.00	6,990.2	150.0	219.6	-139.0	7.50	7.50	0.00
7,080.0	39.01	180.00	7,021.9	125.7	219.6	-114.7	7.50	7.50	0.00
7,120.0	42.01	180.00	7,052.3	99.7	219.6	-88.8	7.50	7.50	0.00
7,160.0	45.01	180.00	7,081.3	72.1	219.6	-61.3	7.50	7.50	0.00
7,200.0	48.01	180.00	7,108.9	43.1	219.6	-32.3	7.50	7.50	0.00
7,240.0	51.01	180.00	7,134.8	12.7	219.6	-1.9	7.50	7.50	0.00
7,280.0	54.01	180.00	7,159.2	-19.0	219.6	29.8	7.50	7.50	0.00
7,320.0	57.01	180.00	7,181.8	-52.0	219.6	62.7	7.50	7.50	0.00
7,360.0	60.01	180.00	7,202.7	-86.1	219.6	96.8	7.50	7.50	0.00
7,400.0	63.01	180.00	7,221.8	-121.3	219.6	131.9	7.50	7.50	0.00
7,440.0	66.01	180.00	7,239.0	-157.4	219.6	168.0	7.50	7.50	0.00
7,480.0	69.01	180.00	7,254.3	-194.3	219.6	204.9	7.50	7.50	0.00
7,520.0	72.01	180.00	7,267.6	-232.0	219.6	242.5	7.50	7.50	0.00
7,560.0	75.01	180.00	7,279.0	-270.4	219.6	280.8	7.50	7.50	0.00
7,600.0	78.01	180.00	7,288.3	-309.3	219.6	319.7	7.50	7.50	0.00
7,640.0	81.01	180.00	7,295.6	-348.6	219.6	359.0	7.50	7.50	0.00
7,680.0	84.01	180.00	7,300.8	-388.2	219.6	398.6	7.50	7.50	0.00
7,720.0	87.01	180.00	7,303.9	-428.1	219.6	438.4	7.50	7.50	0.00
7,760.0	90.01	180.00	7,305.0	-468.1	219.6	478.3	7.50	7.50	0.00
7,765.6	90.43	180.00	7,305.0	-473.7	219.6	483.9	7.48	7.48	0.00
End of Build - 7"									
7,800.0	90.43	180.00	7,304.7	-508.1	219.6	518.3	0.00	0.00	0.00
7,840.0	90.43	180.00	7,304.4	-548.1	219.6	558.2	0.00	0.00	0.00
7,880.0	90.43	180.00	7,304.1	-588.1	219.6	598.2	0.00	0.00	0.00
7,920.0	90.43	180.00	7,303.8	-628.1	219.6	638.1	0.00	0.00	0.00
7,960.0	90.43	180.00	7,303.5	-668.1	219.6	678.1	0.00	0.00	0.00
8,000.0	90.43	180.00	7,303.2	-708.1	219.6	718.0	0.00	0.00	0.00
8,040.0	90.43	180.00	7,302.9	-748.1	219.6	758.0	0.00	0.00	0.00
8,080.0	90.43	180.00	7,302.6	-788.1	219.6	797.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-303
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,120.0	90.43	180.00	7,302.3	-828.1	219.6	837.9	0.00	0.00	0.00
8,160.0	90.43	180.00	7,302.0	-868.1	219.6	877.8	0.00	0.00	0.00
8,200.0	90.43	180.00	7,301.7	-908.1	219.6	917.8	0.00	0.00	0.00
8,240.0	90.43	180.00	7,301.4	-948.1	219.6	957.7	0.00	0.00	0.00
8,280.0	90.43	180.00	7,301.1	-988.1	219.6	997.7	0.00	0.00	0.00
8,320.0	90.43	180.00	7,300.8	-1,028.1	219.6	1,037.6	0.00	0.00	0.00
8,360.0	90.43	180.00	7,300.5	-1,068.1	219.6	1,077.6	0.00	0.00	0.00
8,400.0	90.43	180.00	7,300.2	-1,108.1	219.6	1,117.5	0.00	0.00	0.00
8,440.0	90.43	180.00	7,299.9	-1,148.1	219.6	1,157.5	0.00	0.00	0.00
8,480.0	90.43	180.00	7,299.6	-1,188.1	219.6	1,197.4	0.00	0.00	0.00
8,520.0	90.43	180.00	7,299.3	-1,228.1	219.6	1,237.4	0.00	0.00	0.00
8,560.0	90.43	180.00	7,299.0	-1,268.1	219.6	1,277.3	0.00	0.00	0.00
8,600.0	90.43	180.00	7,298.7	-1,308.1	219.6	1,317.3	0.00	0.00	0.00
8,640.0	90.43	180.00	7,298.4	-1,348.1	219.6	1,357.2	0.00	0.00	0.00
8,680.0	90.43	180.00	7,298.1	-1,388.1	219.6	1,397.2	0.00	0.00	0.00
8,720.0	90.43	180.00	7,297.8	-1,428.1	219.6	1,437.1	0.00	0.00	0.00
8,760.0	90.43	180.00	7,297.5	-1,468.1	219.6	1,477.1	0.00	0.00	0.00
8,800.0	90.43	180.00	7,297.2	-1,508.1	219.6	1,517.0	0.00	0.00	0.00
8,840.0	90.43	180.00	7,296.9	-1,548.1	219.6	1,557.0	0.00	0.00	0.00
8,880.0	90.43	180.00	7,296.6	-1,588.1	219.6	1,596.9	0.00	0.00	0.00
8,920.0	90.43	180.00	7,296.3	-1,628.1	219.6	1,636.9	0.00	0.00	0.00
8,960.0	90.43	180.00	7,296.0	-1,668.1	219.6	1,676.8	0.00	0.00	0.00
9,000.0	90.43	180.00	7,295.7	-1,708.1	219.6	1,716.8	0.00	0.00	0.00
9,040.0	90.43	180.00	7,295.4	-1,748.1	219.6	1,756.7	0.00	0.00	0.00
9,080.0	90.43	180.00	7,295.1	-1,788.1	219.6	1,796.7	0.00	0.00	0.00
9,120.0	90.43	180.00	7,294.8	-1,828.1	219.6	1,836.6	0.00	0.00	0.00
9,160.0	90.43	180.00	7,294.5	-1,868.1	219.6	1,876.6	0.00	0.00	0.00
9,200.0	90.43	180.00	7,294.2	-1,908.1	219.6	1,916.5	0.00	0.00	0.00
9,240.0	90.43	180.00	7,293.9	-1,948.1	219.6	1,956.5	0.00	0.00	0.00
9,280.0	90.43	180.00	7,293.6	-1,988.1	219.6	1,996.4	0.00	0.00	0.00
9,320.0	90.43	180.00	7,293.3	-2,028.1	219.6	2,036.4	0.00	0.00	0.00
9,360.0	90.43	180.00	7,293.0	-2,068.0	219.6	2,076.3	0.00	0.00	0.00
9,400.0	90.43	180.00	7,292.7	-2,108.0	219.6	2,116.3	0.00	0.00	0.00
9,440.0	90.43	180.00	7,292.4	-2,148.0	219.6	2,156.2	0.00	0.00	0.00
9,480.0	90.43	180.00	7,292.1	-2,188.0	219.6	2,196.2	0.00	0.00	0.00
9,520.0	90.43	180.00	7,291.8	-2,228.0	219.6	2,236.1	0.00	0.00	0.00
9,560.0	90.43	180.00	7,291.5	-2,268.0	219.6	2,276.1	0.00	0.00	0.00
9,600.0	90.43	180.00	7,291.2	-2,308.0	219.6	2,316.0	0.00	0.00	0.00
9,640.0	90.43	180.00	7,290.9	-2,348.0	219.6	2,356.0	0.00	0.00	0.00
9,680.0	90.43	180.00	7,290.6	-2,388.0	219.6	2,395.9	0.00	0.00	0.00
9,720.0	90.43	180.00	7,290.3	-2,428.0	219.6	2,435.9	0.00	0.00	0.00
9,760.0	90.43	180.00	7,290.0	-2,468.0	219.6	2,475.8	0.00	0.00	0.00
9,800.0	90.43	180.00	7,289.7	-2,508.0	219.6	2,515.8	0.00	0.00	0.00
9,840.0	90.43	180.00	7,289.4	-2,548.0	219.6	2,555.7	0.00	0.00	0.00
9,880.0	90.43	180.00	7,289.1	-2,588.0	219.6	2,595.7	0.00	0.00	0.00
9,920.0	90.43	180.00	7,288.8	-2,628.0	219.6	2,635.6	0.00	0.00	0.00
9,960.0	90.43	180.00	7,288.5	-2,668.0	219.6	2,675.6	0.00	0.00	0.00
10,000.0	90.43	180.00	7,288.2	-2,708.0	219.6	2,715.5	0.00	0.00	0.00
10,040.0	90.43	180.00	7,287.9	-2,748.0	219.6	2,755.5	0.00	0.00	0.00
10,080.0	90.43	180.00	7,287.6	-2,788.0	219.6	2,795.5	0.00	0.00	0.00
10,120.0	90.43	180.00	7,287.3	-2,828.0	219.6	2,835.4	0.00	0.00	0.00
10,160.0	90.43	180.00	7,287.0	-2,868.0	219.6	2,875.4	0.00	0.00	0.00
10,200.0	90.43	180.00	7,286.7	-2,908.0	219.6	2,915.3	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-303
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,240.0	90.43	180.00	7,286.4	-2,948.0	219.6	2,955.3	0.00	0.00	0.00
10,280.0	90.43	180.00	7,286.1	-2,988.0	219.6	2,995.2	0.00	0.00	0.00
10,320.0	90.43	180.00	7,285.8	-3,028.0	219.6	3,035.2	0.00	0.00	0.00
10,360.0	90.43	180.00	7,285.5	-3,068.0	219.6	3,075.1	0.00	0.00	0.00
10,400.0	90.43	180.00	7,285.2	-3,108.0	219.6	3,115.1	0.00	0.00	0.00
10,440.0	90.43	180.00	7,284.9	-3,148.0	219.6	3,155.0	0.00	0.00	0.00
10,480.0	90.43	180.00	7,284.6	-3,188.0	219.6	3,195.0	0.00	0.00	0.00
10,520.0	90.43	180.00	7,284.3	-3,228.0	219.6	3,234.9	0.00	0.00	0.00
10,560.0	90.43	180.00	7,284.0	-3,268.0	219.6	3,274.9	0.00	0.00	0.00
10,600.0	90.43	180.00	7,283.7	-3,308.0	219.6	3,314.8	0.00	0.00	0.00
10,640.0	90.43	180.00	7,283.4	-3,348.0	219.6	3,354.8	0.00	0.00	0.00
10,680.0	90.43	180.00	7,283.1	-3,388.0	219.6	3,394.7	0.00	0.00	0.00
10,720.0	90.43	180.00	7,282.8	-3,428.0	219.6	3,434.7	0.00	0.00	0.00
10,760.0	90.43	180.00	7,282.5	-3,468.0	219.6	3,474.6	0.00	0.00	0.00
10,800.0	90.43	180.00	7,282.2	-3,508.0	219.6	3,514.6	0.00	0.00	0.00
10,840.0	90.43	180.00	7,281.9	-3,548.0	219.6	3,554.5	0.00	0.00	0.00
10,880.0	90.43	180.00	7,281.6	-3,588.0	219.6	3,594.5	0.00	0.00	0.00
10,920.0	90.43	180.00	7,281.3	-3,628.0	219.6	3,634.4	0.00	0.00	0.00
10,960.0	90.43	180.00	7,281.0	-3,668.0	219.6	3,674.4	0.00	0.00	0.00
11,000.0	90.43	180.00	7,280.7	-3,708.0	219.6	3,714.3	0.00	0.00	0.00
11,040.0	90.43	180.00	7,280.4	-3,748.0	219.6	3,754.3	0.00	0.00	0.00
11,080.0	90.43	180.00	7,280.1	-3,788.0	219.6	3,794.2	0.00	0.00	0.00
11,120.0	90.43	180.00	7,279.8	-3,828.0	219.6	3,834.2	0.00	0.00	0.00
11,160.0	90.43	180.00	7,279.5	-3,868.0	219.6	3,874.1	0.00	0.00	0.00
11,200.0	90.43	180.00	7,279.2	-3,908.0	219.6	3,914.1	0.00	0.00	0.00
11,240.0	90.43	180.00	7,278.9	-3,948.0	219.6	3,954.0	0.00	0.00	0.00
11,280.0	90.43	180.00	7,278.6	-3,988.0	219.6	3,994.0	0.00	0.00	0.00
11,320.0	90.43	180.00	7,278.3	-4,028.0	219.6	4,033.9	0.00	0.00	0.00
11,360.0	90.43	180.00	7,278.0	-4,068.0	219.6	4,073.9	0.00	0.00	0.00
11,400.0	90.43	180.00	7,277.7	-4,108.0	219.6	4,113.8	0.00	0.00	0.00
11,440.0	90.43	180.00	7,277.4	-4,148.0	219.6	4,153.8	0.00	0.00	0.00
11,480.0	90.43	180.00	7,277.1	-4,188.0	219.6	4,193.7	0.00	0.00	0.00
11,520.0	90.43	180.00	7,276.8	-4,228.0	219.6	4,233.7	0.00	0.00	0.00
11,560.0	90.43	180.00	7,276.5	-4,268.0	219.6	4,273.6	0.00	0.00	0.00
11,600.0	90.43	180.00	7,276.2	-4,308.0	219.6	4,313.6	0.00	0.00	0.00
11,640.0	90.43	180.00	7,275.9	-4,348.0	219.6	4,353.5	0.00	0.00	0.00
11,680.0	90.43	180.00	7,275.6	-4,388.0	219.6	4,393.5	0.00	0.00	0.00
11,720.0	90.43	180.00	7,275.3	-4,428.0	219.6	4,433.4	0.00	0.00	0.00
11,758.6	90.43	180.00	7,275.0	-4,466.6	219.6	4,472.0	0.00	0.00	0.00

BHL 500'FSL, 2433'FEL

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,765.6	7,305.0	7"	7	7-1/2

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-303
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,200.0	1,200.0	0.0	0.0	KOP #1
6,559.8	6,541.0	296.0	219.6	KOP #2
7,765.6	7,305.0	-473.7	219.6	End of Build



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.34-T7N-R66W

Anderson 34M-HZ Pad Sec.34-T7N-R66W

Anderson 34M-303

Wellbore #1

Plan #1 (5-13-13)

Anticollision Report

14 May, 2013



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (5-13-13)
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	Stations
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 10,000.0ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program		Date	5/14/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,758.6	Plan #1 (5-13-13) (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Anderson (Existing Wells) Sec.34-T7N-R66W						
Anderson 34-34 (Exist) - Wellbore #1 - Wellbore #1	11,616.5	7,291.1	417.0	185.4	1.801	CC, ES, SF
Anderson 34M-HZ Pad Sec.34-T7N-R66W						
Anderson 34M-223 - Wellbore #1 - Plan #1 (5-13-13)	400.0	400.0	30.6	29.0	19.433	CC, ES
Anderson 34M-223 - Wellbore #1 - Plan #1 (5-13-13)	11,758.6	11,689.5	352.8	178.9	2.029	SF
Anderson 34M-403 - Wellbore #1 - Plan #1 (5-13-13)	1,200.0	1,200.0	30.6	25.4	5.914	CC, ES
Anderson 34M-403 - Wellbore #1 - Plan #1 (5-13-13)	11,758.6	12,349.2	304.3	134.3	1.789	SF

Offset Design Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 34-34 (Exist) - Wellbore #1 - Wellbore #1												
Survey Program: 7800-UNKNOWN												
Offset Site Error: 0.0ft												
Offset Well Error: 0.0ft												
Reference	Offset	Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
0.0	0.0	15.0	15.0	0.0	0.3	171.63	-4,324.5	636.6	4,371.1	4,370.8	0.30	N/A
100.0	100.0	115.0	115.0	0.1	2.3	171.63	-4,324.5	636.6	4,371.1	4,368.7	2.41	1,811.789
200.0	200.0	215.0	215.0	0.3	4.3	171.63	-4,324.5	636.6	4,371.1	4,366.4	4.64	942.584
300.0	300.0	315.0	315.0	0.6	6.3	171.63	-4,324.5	636.6	4,371.1	4,364.2	6.86	636.989
400.0	400.0	415.0	415.0	0.8	8.3	171.63	-4,324.5	636.6	4,371.1	4,362.0	9.09	481.033
500.0	500.0	515.0	515.0	1.0	10.3	171.63	-4,324.5	636.6	4,371.1	4,359.8	11.31	386.424
600.0	600.0	615.0	615.0	1.2	12.3	171.63	-4,324.5	636.6	4,371.1	4,357.5	13.54	322.914
700.0	700.0	715.0	715.0	1.5	14.3	171.63	-4,324.5	636.6	4,371.1	4,355.3	15.76	277.333
800.0	800.0	815.0	815.0	1.7	16.3	171.63	-4,324.5	636.6	4,371.1	4,353.1	17.99	243.028
900.0	900.0	915.0	915.0	1.9	18.3	171.63	-4,324.5	636.6	4,371.1	4,350.9	20.21	216.276
1,000.0	1,000.0	1,015.0	1,015.0	2.1	20.3	171.63	-4,324.5	636.6	4,371.1	4,348.7	22.44	194.829
1,100.0	1,100.0	1,115.0	1,115.0	2.4	22.3	171.63	-4,324.5	636.6	4,371.1	4,346.4	24.66	177.253
1,200.0	1,200.0	1,215.0	1,215.0	2.6	24.3	171.63	-4,324.5	636.6	4,371.1	4,344.2	26.88	162.585
1,300.0	1,300.0	1,315.0	1,315.0	2.8	26.3	135.05	-4,324.5	636.6	4,372.3	4,343.2	29.10	150.260
1,400.0	1,399.8	1,414.8	1,414.8	3.0	28.3	135.05	-4,324.5	636.6	4,376.0	4,344.7	31.29	139.859
1,500.6	1,500.1	1,515.1	1,515.1	3.3	30.3	135.04	-4,324.5	636.6	4,382.3	4,348.8	33.47	130.932
1,600.0	1,598.9	1,613.9	1,613.9	3.5	32.3	135.14	-4,324.5	636.6	4,389.6	4,354.0	35.67	123.057
1,700.0	1,698.4	1,713.4	1,713.4	3.7	34.3	135.23	-4,324.5	636.6	4,397.1	4,359.2	37.89	116.041
1,800.0	1,797.8	1,812.8	1,812.8	4.0	36.3	135.33	-4,324.5	636.6	4,404.6	4,364.4	40.12	109.791
1,900.0	1,897.3	1,912.3	1,912.3	4.2	38.2	135.42	-4,324.5	636.6	4,412.0	4,369.7	42.35	104.191

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 34-34 (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7800-UNKNOWN													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,000.0	1,996.7	2,011.7	2,011.7	4.5	40.2	135.52		-4,324.5	636.6	4,419.5	4,374.9	44.58	99.146	
2,100.0	2,096.2	2,111.2	2,111.2	4.8	42.2	135.61		-4,324.5	636.6	4,427.0	4,380.2	46.81	94.577	
2,200.0	2,195.6	2,210.6	2,210.6	5.0	44.2	135.71		-4,324.5	636.6	4,434.5	4,385.5	49.04	90.421	
2,300.0	2,295.1	2,310.1	2,310.1	5.3	46.2	135.80		-4,324.5	636.6	4,442.1	4,390.8	51.28	86.625	
2,400.0	2,394.5	2,409.5	2,409.5	5.6	48.2	135.90		-4,324.5	636.6	4,449.6	4,396.1	53.52	83.145	
2,500.0	2,494.0	2,509.0	2,509.0	5.9	50.2	135.99		-4,324.5	636.6	4,457.1	4,401.4	55.75	79.942	
2,600.0	2,593.4	2,608.4	2,608.4	6.1	52.2	136.08		-4,324.5	636.6	4,464.7	4,406.7	57.99	76.986	
2,700.0	2,692.8	2,707.8	2,707.8	6.4	54.2	136.18		-4,324.5	636.6	4,472.3	4,412.0	60.23	74.249	
2,800.0	2,792.3	2,807.3	2,807.3	6.7	56.1	136.27		-4,324.5	636.6	4,479.9	4,417.4	62.47	71.707	
2,900.0	2,891.7	2,906.7	2,906.7	7.0	58.1	136.36		-4,324.5	636.6	4,487.5	4,422.7	64.72	69.342	
3,000.0	2,991.2	3,006.2	3,006.2	7.3	60.1	136.45		-4,324.5	636.6	4,495.1	4,428.1	66.96	67.134	
3,100.0	3,090.6	3,105.6	3,105.6	7.6	62.1	136.54		-4,324.5	636.6	4,502.7	4,433.5	69.20	65.069	
3,200.0	3,190.1	3,205.1	3,205.1	7.8	64.1	136.64		-4,324.5	636.6	4,510.3	4,438.9	71.44	63.134	
3,300.0	3,289.5	3,304.5	3,304.5	8.1	66.1	136.73		-4,324.5	636.6	4,518.0	4,444.3	73.68	61.316	
3,400.0	3,389.0	3,404.0	3,404.0	8.4	68.1	136.82		-4,324.5	636.6	4,525.6	4,449.7	75.93	59.606	
3,500.0	3,488.4	3,503.4	3,503.4	8.7	70.1	136.91		-4,324.5	636.6	4,533.3	4,455.1	78.17	57.993	
3,600.0	3,587.9	3,602.9	3,602.9	9.0	72.1	137.00		-4,324.5	636.6	4,540.9	4,460.5	80.41	56.471	
3,700.0	3,687.3	3,702.3	3,702.3	9.3	74.0	137.09		-4,324.5	636.6	4,548.6	4,466.0	82.65	55.032	
3,800.0	3,786.8	3,801.8	3,801.8	9.6	76.0	137.18		-4,324.5	636.6	4,556.3	4,471.4	84.90	53.668	
3,900.0	3,886.2	3,901.2	3,901.2	9.9	78.0	137.27		-4,324.5	636.6	4,564.0	4,476.9	87.14	52.375	
4,000.0	3,985.7	4,000.7	4,000.7	10.1	80.0	137.35		-4,324.5	636.6	4,571.8	4,482.4	89.38	51.147	
4,100.0	4,085.1	4,100.1	4,100.1	10.4	82.0	137.44		-4,324.5	636.6	4,579.5	4,487.9	91.63	49.979	
4,200.0	4,184.6	4,199.6	4,199.6	10.7	84.0	137.53		-4,324.5	636.6	4,587.2	4,493.4	93.87	48.867	
4,300.0	4,284.0	4,299.0	4,299.0	11.0	86.0	137.62		-4,324.5	636.6	4,595.0	4,498.9	96.11	47.807	
4,400.0	4,383.5	4,398.5	4,398.5	11.3	88.0	137.71		-4,324.5	636.6	4,602.7	4,504.4	98.36	46.796	
4,500.0	4,482.9	4,497.9	4,497.9	11.6	90.0	137.79		-4,324.5	636.6	4,610.5	4,509.9	100.60	45.830	
4,600.0	4,582.4	4,597.4	4,597.4	11.9	91.9	137.88		-4,324.5	636.6	4,618.3	4,515.5	102.84	44.906	
4,700.0	4,681.8	4,696.8	4,696.8	12.2	93.9	137.97		-4,324.5	636.6	4,626.1	4,521.0	105.09	44.021	
4,718.2	4,699.9	4,714.9	4,714.9	12.2	94.3	137.98		-4,324.5	636.6	4,627.5	4,522.0	105.49	43.865	
4,800.0	4,781.4	4,796.4	4,796.4	12.4	95.9	138.12		-4,324.5	636.6	4,633.0	4,525.6	107.44	43.123	
4,900.0	4,881.2	4,896.2	4,896.2	12.6	97.9	138.23		-4,324.5	636.6	4,637.4	4,527.7	109.72	42.266	
5,000.0	4,981.2	4,996.2	4,996.2	12.8	99.9	138.27		-4,324.5	636.6	4,639.2	4,527.3	111.92	41.451	
5,018.8	5,000.0	5,015.0	5,015.0	12.8	100.3	174.84		-4,324.5	636.6	4,639.3	4,526.9	112.33	41.302	
5,100.0	5,081.2	5,096.2	5,096.2	13.0	101.9	174.84		-4,324.5	636.6	4,639.3	4,525.2	114.10	40.661	
5,200.0	5,181.2	5,196.2	5,196.2	13.2	103.9	174.84		-4,324.5	636.6	4,639.3	4,523.0	116.30	39.891	
5,300.0	5,281.2	5,296.2	5,296.2	13.3	105.9	174.84		-4,324.5	636.6	4,639.3	4,520.8	118.50	39.149	
5,400.0	5,381.2	5,396.2	5,396.2	13.5	107.9	174.84		-4,324.5	636.6	4,639.3	4,518.6	120.71	38.434	
5,500.0	5,481.2	5,496.2	5,496.2	13.7	109.9	174.84		-4,324.5	636.6	4,639.3	4,516.3	122.91	37.744	
5,600.0	5,581.2	5,596.2	5,596.2	13.9	111.9	174.84		-4,324.5	636.6	4,639.3	4,514.1	125.12	37.079	
5,700.0	5,681.2	5,696.2	5,696.2	14.1	113.9	174.84		-4,324.5	636.6	4,639.3	4,511.9	127.32	36.436	
5,800.0	5,781.2	5,796.2	5,796.2	14.3	115.9	174.84		-4,324.5	636.6	4,639.3	4,509.7	129.53	35.816	
5,900.0	5,881.2	5,896.2	5,896.2	14.5	117.9	174.84		-4,324.5	636.6	4,639.3	4,507.5	131.74	35.215	
6,000.0	5,981.2	5,996.2	5,996.2	14.7	119.9	174.84		-4,324.5	636.6	4,639.3	4,505.3	133.95	34.635	
6,100.0	6,081.2	6,096.2	6,096.2	14.9	121.9	174.84		-4,324.5	636.6	4,639.3	4,503.1	136.16	34.073	
6,200.0	6,181.2	6,196.2	6,196.2	15.1	123.9	174.84		-4,324.5	636.6	4,639.3	4,500.9	138.37	33.529	
6,300.0	6,281.2	6,296.2	6,296.2	15.3	125.9	174.84		-4,324.5	636.6	4,639.3	4,498.7	140.58	33.002	
6,400.0	6,381.2	6,396.2	6,396.2	15.5	127.9	174.84		-4,324.5	636.6	4,639.3	4,496.5	142.79	32.491	
6,500.0	6,481.2	6,496.2	6,496.2	15.7	129.9	174.84		-4,324.5	636.6	4,639.3	4,494.3	145.00	31.996	
6,559.8	6,541.0	6,556.0	6,556.0	15.8	131.1	174.84		-4,324.5	636.6	4,639.3	4,492.9	146.32	31.707	
6,600.0	6,581.2	6,596.2	6,596.2	15.9	131.9	-5.17		-4,324.5	636.6	4,638.2	4,491.2	146.97	31.559	
6,650.0	6,631.0	6,646.0	6,646.0	15.9	132.9	-5.20		-4,324.5	636.6	4,634.0	4,486.8	147.21	31.479	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 34-34 (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7800-UNKNOWN													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,700.0	6,680.4	6,695.4	6,695.4	16.0	133.9	-5.26	-4,324.5	636.6	4,626.5	4,479.7	146.81	31.514		
6,750.0	6,729.2	6,744.2	6,744.2	16.0	134.9	-5.35	-4,324.5	636.6	4,615.8	4,470.1	145.76	31.668		
6,800.0	6,777.3	6,792.3	6,792.3	16.0	135.8	-5.47	-4,324.5	636.6	4,602.0	4,457.9	144.06	31.945		
6,850.0	6,824.3	6,839.3	6,839.3	16.0	136.8	-5.62	-4,324.5	636.6	4,585.0	4,443.3	141.71	32.355		
6,900.0	6,870.1	6,885.1	6,885.1	16.0	137.7	-5.80	-4,324.5	636.6	4,565.1	4,426.4	138.72	32.909		
6,950.0	6,914.5	6,929.5	6,929.5	16.0	138.6	-6.03	-4,324.5	636.6	4,542.2	4,407.1	135.09	33.623		
7,000.0	6,957.2	6,972.2	6,972.2	16.0	139.4	-6.31	-4,324.5	636.6	4,516.4	4,385.6	130.85	34.516		
7,050.0	6,998.3	7,013.3	7,013.3	16.0	140.3	-6.64	-4,324.5	636.6	4,488.0	4,362.0	126.02	35.613		
7,100.0	7,037.3	7,052.3	7,052.3	16.0	141.0	-7.05	-4,324.5	636.6	4,456.9	4,336.3	120.64	36.944		
7,150.0	7,074.2	7,089.2	7,089.2	16.0	141.8	-7.53	-4,324.5	636.6	4,423.3	4,308.6	114.76	38.546		
7,200.0	7,108.9	7,123.9	7,123.9	16.0	142.5	-8.12	-4,324.5	636.6	4,387.5	4,279.0	108.44	40.460		
7,250.0	7,141.1	7,156.1	7,156.1	16.0	143.1	-8.85	-4,324.5	636.6	4,349.4	4,247.6	101.79	42.731		
7,300.0	7,170.7	7,185.7	7,185.7	16.0	143.7	-9.74	-4,324.5	636.6	4,309.3	4,214.4	94.94	45.389		
7,350.0	7,197.7	7,212.7	7,212.7	16.1	144.3	-10.87	-4,324.5	636.6	4,267.4	4,179.3	88.13	48.421		
7,400.0	7,221.8	7,236.8	7,236.8	16.3	144.7	-12.33	-4,324.5	636.6	4,223.9	4,142.1	81.73	51.682		
7,450.0	7,243.0	7,258.0	7,258.0	16.5	145.2	-14.26	-4,324.5	636.6	4,178.8	4,102.4	76.38	54.714		
7,500.0	7,261.2	7,276.2	7,276.2	16.8	145.5	-16.91	-4,324.5	636.6	4,132.5	4,059.3	73.22	56.443		
7,550.0	7,276.3	7,291.3	7,291.3	17.2	145.8	-20.72	-4,324.5	636.6	4,085.1	4,010.9	74.18	55.070		
7,600.0	7,288.3	7,303.3	7,303.3	17.6	146.1	-26.56	-4,324.5	636.6	4,036.8	3,954.6	82.23	49.093		
7,650.0	7,297.1	7,312.1	7,312.1	18.0	146.2	-36.27	-4,324.5	636.6	3,987.9	3,886.6	101.29	39.372		
7,700.0	7,302.6	7,317.6	7,317.6	18.4	146.4	-53.68	-4,324.5	636.6	3,938.5	3,804.3	134.13	29.362		
7,750.0	7,304.9	7,319.9	7,319.9	18.9	146.4	-83.18	-4,324.5	636.6	3,888.8	3,724.7	164.13	23.694		
7,765.6	7,305.0	7,320.0	7,320.0	19.1	146.4	-93.96	-4,324.5	636.6	3,873.3	3,708.4	164.90	23.489		
7,800.0	7,304.7	7,319.7	7,319.7	19.5	146.4	-93.93	-4,324.5	636.6	3,839.1	3,673.8	165.26	23.230		
7,900.0	7,304.0	7,319.0	7,319.0	20.6	146.4	-93.83	-4,324.5	636.6	3,739.7	3,573.3	166.41	22.473		
8,000.0	7,303.2	7,318.2	7,318.2	21.9	146.4	-93.72	-4,324.5	636.6	3,640.4	3,472.7	167.66	21.712		
8,100.0	7,302.5	7,317.5	7,317.5	23.2	146.3	-93.62	-4,324.5	636.6	3,541.0	3,372.0	169.01	20.952		
8,200.0	7,301.7	7,316.7	7,316.7	24.6	146.3	-93.52	-4,324.5	636.6	3,441.8	3,271.3	170.43	20.194		
8,300.0	7,301.0	7,316.0	7,316.0	26.1	146.3	-93.42	-4,324.5	636.6	3,342.5	3,170.6	171.92	19.442		
8,400.0	7,300.2	7,315.2	7,315.2	27.6	146.3	-93.31	-4,324.5	636.6	3,243.3	3,069.9	173.47	18.697		
8,500.0	7,299.5	7,314.5	7,314.5	29.2	146.3	-93.21	-4,324.5	636.6	3,144.2	2,969.1	175.05	17.961		
8,600.0	7,298.7	7,313.7	7,313.7	30.8	146.3	-93.11	-4,324.5	636.6	3,045.1	2,868.4	176.68	17.235		
8,700.0	7,298.0	7,313.0	7,313.0	32.5	146.3	-93.00	-4,324.5	636.6	2,946.1	2,767.7	178.34	16.519		
8,800.0	7,297.2	7,312.2	7,312.2	34.2	146.2	-92.90	-4,324.5	636.6	2,847.1	2,667.1	180.03	15.815		
8,900.0	7,296.5	7,311.5	7,311.5	35.9	146.2	-92.80	-4,324.5	636.6	2,748.2	2,566.5	181.74	15.122		
9,000.0	7,295.7	7,310.7	7,310.7	37.6	146.2	-92.70	-4,324.5	636.6	2,649.4	2,466.0	183.47	14.441		
9,100.0	7,295.0	7,310.0	7,310.0	39.4	146.2	-92.59	-4,324.5	636.6	2,550.7	2,365.5	185.22	13.772		
9,200.0	7,294.2	7,309.2	7,309.2	41.1	146.2	-92.49	-4,324.5	636.6	2,452.1	2,265.2	186.98	13.114		
9,300.0	7,293.5	7,308.5	7,308.5	42.9	146.2	-92.39	-4,324.5	636.6	2,353.7	2,164.9	188.76	12.469		
9,400.0	7,292.7	7,307.7	7,307.7	44.7	146.2	-92.28	-4,324.5	636.6	2,255.3	2,064.8	190.55	11.836		
9,500.0	7,292.0	7,307.0	7,307.0	46.5	146.1	-92.18	-4,324.5	636.6	2,157.1	1,964.8	192.35	11.215		
9,600.0	7,291.2	7,306.2	7,306.2	48.3	146.1	-92.08	-4,324.5	636.6	2,059.1	1,864.9	194.15	10.605		
9,700.0	7,290.4	7,305.4	7,305.4	50.1	146.1	-91.98	-4,324.5	636.6	1,961.3	1,765.3	195.97	10.008		
9,800.0	7,289.7	7,304.7	7,304.7	51.9	146.1	-91.87	-4,324.5	636.6	1,863.7	1,665.9	197.79	9.422		
9,900.0	7,288.9	7,303.9	7,303.9	53.8	146.1	-91.77	-4,324.5	636.6	1,766.4	1,566.7	199.62	8.848		
10,000.0	7,288.2	7,303.2	7,303.2	55.6	146.1	-91.67	-4,324.5	636.6	1,669.4	1,467.9	201.46	8.286		
10,100.0	7,287.4	7,302.4	7,302.4	57.4	146.0	-91.56	-4,324.5	636.6	1,572.7	1,369.4	203.30	7.736		
10,200.0	7,286.7	7,301.7	7,301.7	59.3	146.0	-91.46	-4,324.5	636.6	1,476.6	1,271.4	205.15	7.198		
10,300.0	7,285.9	7,300.9	7,300.9	61.1	146.0	-91.36	-4,324.5	636.6	1,380.9	1,173.9	206.99	6.671		
10,400.0	7,285.2	7,300.2	7,300.2	63.0	146.0	-91.25	-4,324.5	636.6	1,285.9	1,077.1	208.85	6.157		
10,500.0	7,284.4	7,299.4	7,299.4	64.8	146.0	-91.15	-4,324.5	636.6	1,191.8	981.1	210.70	5.656		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design		Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 34-34 (Exist) - Wellbore #1 - Wellbore #1										Offset Site Error:	0.0 ft	
Survey Program: 7800-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
10,600.0	7,283.7	7,298.7	7,298.7	66.7	146.0	-91.05	-4,324.5	636.6	1,098.7	886.1	212.56	5.169		
10,700.0	7,282.9	7,297.9	7,297.9	68.6	146.0	-90.94	-4,324.5	636.6	1,006.9	792.5	214.42	4.696		
10,800.0	7,282.2	7,297.2	7,297.2	70.4	145.9	-90.84	-4,324.5	636.6	916.8	700.5	216.29	4.239		
10,900.0	7,281.4	7,296.4	7,296.4	72.3	145.9	-90.74	-4,324.5	636.6	829.0	610.8	218.15	3.800		
11,000.0	7,280.7	7,295.7	7,295.7	74.2	145.9	-90.64	-4,324.5	636.6	744.3	524.2	220.02	3.383		
11,100.0	7,279.9	7,294.9	7,294.9	76.1	145.9	-90.53	-4,324.5	636.6	663.8	441.9	221.89	2.992		
11,200.0	7,279.2	7,294.2	7,294.2	78.0	145.9	-90.43	-4,324.5	636.6	589.4	365.6	223.76	2.634		
11,300.0	7,278.4	7,293.4	7,293.4	79.8	145.9	-90.33	-4,324.5	636.6	523.5	297.9	225.64	2.320		
11,400.0	7,277.7	7,292.7	7,292.7	81.7	145.9	-90.22	-4,324.5	636.6	469.8	242.3	227.51	2.065		
11,500.0	7,276.9	7,291.9	7,291.9	83.6	145.8	-90.12	-4,324.5	636.6	433.0	203.6	229.39	1.888		
11,600.0	7,276.2	7,291.2	7,291.2	85.5	145.8	-90.02	-4,324.5	636.6	417.3	186.1	231.26	1.805		
11,616.5	7,276.1	7,291.1	7,291.1	85.8	145.8	-90.00	-4,324.5	636.6	417.0	185.4	231.57	1.801 CC, ES, SF		
11,700.0	7,275.4	7,290.4	7,290.4	87.4	145.8	-89.91	-4,324.5	636.6	425.3	192.1	233.14	1.824		
11,758.6	7,275.0	7,290.0	7,290.0	88.5	145.8	-89.85	-4,324.5	636.6	440.5	206.3	234.24	1.881		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-223 - Wellbore #1 - Plan #1 (5-13-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	90.01	0.0	30.6	30.6					
100.0	100.0	100.0	100.0	0.1	0.1	90.01	0.0	30.6	30.6	30.4	0.22	136.030		
200.0	200.0	200.0	200.0	0.3	0.3	90.01	0.0	30.6	30.6	29.9	0.67	45.343		
300.0	300.0	300.0	300.0	0.6	0.6	90.01	0.0	30.6	30.6	29.5	1.12	27.206		
400.0	400.0	400.0	400.0	0.8	0.8	90.01	0.0	30.6	30.6	29.0	1.57	19.433 CC, ES		
500.0	500.0	499.0	499.0	1.0	1.0	88.52	0.8	32.1	32.1	30.1	2.02	15.924		
600.0	600.0	597.8	597.7	1.2	1.2	84.83	3.3	36.5	36.8	34.3	2.46	14.940		
700.0	700.0	696.2	695.6	1.5	1.5	80.43	7.4	44.0	44.8	41.9	2.91	15.369		
800.0	800.0	794.3	793.1	1.7	1.7	76.43	13.1	54.2	56.1	52.8	3.38	16.619		
900.0	900.0	893.5	891.4	1.9	2.0	73.58	19.2	65.3	68.6	64.7	3.84	17.847		
1,000.0	1,000.0	992.7	989.8	2.1	2.3	71.61	25.4	76.4	81.1	76.8	4.31	18.806		
1,100.0	1,100.0	1,091.8	1,088.2	2.4	2.6	70.17	31.5	87.4	93.7	88.9	4.79	19.567		
1,200.0	1,200.0	1,191.0	1,186.5	2.6	2.9	69.07	37.7	98.5	106.4	101.1	5.27	20.181		
1,300.0	1,300.0	1,290.4	1,285.1	2.8	3.2	31.96	43.8	109.7	117.6	111.9	5.63	20.891		
1,400.0	1,399.8	1,390.0	1,383.9	3.0	3.5	32.37	50.0	120.8	125.8	119.8	6.08	20.701		
1,500.6	1,500.1	1,490.5	1,483.5	3.3	3.9	33.58	56.3	132.0	131.2	124.7	6.54	20.077		
1,600.0	1,598.9	1,589.7	1,581.9	3.5	4.2	35.16	62.4	143.1	135.2	128.2	7.00	19.301		
1,700.0	1,698.4	1,689.5	1,681.0	3.7	4.5	36.65	68.6	154.3	139.2	131.8	7.48	18.614		
1,800.0	1,797.8	1,789.4	1,780.0	4.0	4.8	38.06	74.8	165.5	143.4	135.4	7.97	18.004		
1,900.0	1,897.3	1,889.2	1,879.0	4.2	5.1	39.39	81.0	176.7	147.7	139.2	8.46	17.460		
2,000.0	1,996.7	1,989.1	1,978.1	4.5	5.5	40.64	87.2	187.8	152.0	143.0	8.95	16.972		
2,100.0	2,096.2	2,089.0	2,077.1	4.8	5.8	41.83	93.4	199.0	156.4	146.9	9.46	16.532		
2,200.0	2,195.6	2,188.8	2,176.1	5.0	6.1	42.95	99.6	210.2	160.8	150.8	9.97	16.134		
2,300.0	2,295.1	2,288.7	2,275.1	5.3	6.4	44.01	105.8	221.3	165.3	154.8	10.48	15.772		
2,400.0	2,394.5	2,388.5	2,374.2	5.6	6.8	45.01	112.0	232.5	169.9	158.9	11.00	15.442		
2,500.0	2,494.0	2,488.4	2,473.2	5.9	7.1	45.96	118.2	243.7	174.5	163.0	11.53	15.140		
2,600.0	2,593.4	2,588.2	2,572.2	6.1	7.4	46.86	124.4	254.9	179.2	167.1	12.05	14.863		
2,700.0	2,692.8	2,688.1	2,671.3	6.4	7.7	47.72	130.6	266.0	183.8	171.3	12.59	14.608		
2,800.0	2,792.3	2,787.9	2,770.3	6.7	8.1	48.53	136.8	277.2	188.6	175.5	13.12	14.373		
2,900.0	2,891.7	2,887.8	2,869.3	7.0	8.4	49.30	143.0	288.4	193.4	179.7	13.66	14.155		
3,000.0	2,991.2	2,987.6	2,968.4	7.3	8.7	50.04	149.1	299.5	198.2	184.0	14.20	13.954		
3,100.0	3,090.6	3,087.5	3,067.4	7.6	9.0	50.74	155.3	310.7	203.0	188.3	14.75	13.766		
3,200.0	3,190.1	3,187.3	3,166.4	7.8	9.4	51.40	161.5	321.9	207.9	192.6	15.29	13.591		
3,300.0	3,289.5	3,287.2	3,265.5	8.1	9.7	52.04	167.7	333.1	212.8	196.9	15.84	13.428		
3,400.0	3,389.0	3,387.0	3,364.5	8.4	10.0	52.65	173.9	344.2	217.7	201.3	16.40	13.276		
3,500.0	3,488.4	3,486.9	3,463.5	8.7	10.3	53.23	180.1	355.4	222.6	205.7	16.95	13.133		
3,600.0	3,587.9	3,586.7	3,562.6	9.0	10.7	53.78	186.3	366.6	227.6	210.1	17.51	13.000		
3,700.0	3,687.3	3,686.6	3,661.6	9.3	11.0	54.32	192.5	377.7	232.6	214.5	18.07	12.874		
3,800.0	3,786.8	3,786.4	3,760.6	9.6	11.3	54.83	198.7	388.9	237.6	219.0	18.63	12.755		
3,900.0	3,886.2	3,886.3	3,859.7	9.9	11.6	55.32	204.9	400.1	242.6	223.4	19.19	12.644		
4,000.0	3,985.7	3,986.2	3,958.7	10.1	12.0	55.78	211.1	411.3	247.6	227.9	19.75	12.539		
4,100.0	4,085.1	4,086.0	4,057.7	10.4	12.3	56.23	217.3	422.4	252.7	232.4	20.31	12.439		
4,200.0	4,184.6	4,185.9	4,156.8	10.7	12.6	56.67	223.5	433.6	257.8	236.9	20.88	12.345		
4,300.0	4,284.0	4,285.7	4,255.8	11.0	13.0	57.08	229.7	444.8	262.8	241.4	21.45	12.256		
4,400.0	4,383.5	4,385.6	4,354.8	11.3	13.3	57.48	235.9	455.9	267.9	245.9	22.01	12.171		
4,500.0	4,482.9	4,485.4	4,453.9	11.6	13.6	57.87	242.1	467.1	273.1	250.5	22.58	12.091		
4,600.0	4,582.4	4,585.3	4,552.9	11.9	13.9	58.24	248.3	478.3	278.2	255.0	23.15	12.015		
4,700.0	4,681.8	4,685.1	4,651.9	12.2	14.3	58.60	254.5	489.5	283.3	259.6	23.72	11.942		
4,718.2	4,699.9	4,703.3	4,669.9	12.2	14.3	58.66	255.6	491.5	284.2	260.4	23.83	11.929		
4,800.0	4,781.4	4,785.0	4,750.9	12.4	14.6	58.82	260.6	500.6	289.0	264.8	24.25	11.920		
4,900.0	4,881.2	4,884.6	4,849.8	12.6	14.9	58.52	266.8	511.8	296.6	271.9	24.67	12.020		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-223 - Wellbore #1 - Plan #1 (5-13-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,981.2	4,984.1	4,948.4	12.8	15.2	57.72	57.72	273.0	522.9	306.0	280.9	25.03	12.226	
5,018.8	5,000.0	5,002.7	4,966.9	12.8	15.3	94.09	94.09	274.2	525.0	308.0	282.9	25.08	12.277	
5,100.0	5,081.2	5,083.3	5,046.8	13.0	15.6	93.07	93.07	279.2	534.0	316.7	291.4	25.36	12.491	
5,200.0	5,181.2	5,183.7	5,146.4	13.2	15.9	91.87	91.87	285.4	545.2	327.6	301.9	25.71	12.743	
5,300.0	5,281.2	5,294.2	5,256.3	13.3	16.1	90.86	90.86	291.0	555.3	336.7	310.6	26.05	12.923	
5,400.0	5,381.2	5,405.5	5,367.4	13.5	16.4	90.25	90.25	294.5	561.7	342.4	316.0	26.40	12.968	
5,500.0	5,481.2	5,517.2	5,479.0	13.7	16.5	90.01	90.01	296.0	564.3	344.7	317.9	26.77	12.878	
5,600.0	5,581.2	5,619.4	5,581.2	13.9	16.7	90.00	90.00	296.0	564.4	344.8	317.6	27.14	12.701	
5,700.0	5,681.2	5,719.4	5,681.2	14.1	16.8	90.00	90.00	296.0	564.4	344.8	317.2	27.53	12.523	
5,800.0	5,781.2	5,819.4	5,781.2	14.3	17.0	90.00	90.00	296.0	564.4	344.8	316.9	27.92	12.349	
5,900.0	5,881.2	5,919.4	5,881.2	14.5	17.2	90.00	90.00	296.0	564.4	344.8	316.5	28.31	12.179	
6,000.0	5,981.2	6,019.4	5,981.2	14.7	17.3	90.00	90.00	296.0	564.4	344.8	316.1	28.70	12.013	
6,100.0	6,081.2	6,119.4	6,081.2	14.9	17.5	90.00	90.00	296.0	564.4	344.8	315.7	29.09	11.851	
6,200.0	6,181.2	6,219.4	6,181.2	15.1	17.7	90.00	90.00	296.0	564.4	344.8	315.3	29.49	11.692	
6,300.0	6,281.2	6,319.4	6,281.2	15.3	17.8	90.00	90.00	296.0	564.4	344.8	314.9	29.88	11.537	
6,400.0	6,381.2	6,419.4	6,381.2	15.5	18.0	90.00	90.00	296.0	564.4	344.8	314.5	30.28	11.385	
6,461.9	6,443.1	6,481.3	6,443.1	15.6	18.1	90.00	90.00	296.0	564.4	344.8	314.2	30.53	11.293	
6,500.0	6,481.2	6,519.4	6,481.2	15.7	18.1	90.07	90.07	295.6	564.4	344.8	314.1	30.68	11.239	
6,559.8	6,541.0	6,578.9	6,540.5	15.8	18.2	90.78	90.78	291.3	564.4	344.8	313.9	30.93	11.149	
6,600.0	6,581.2	6,618.4	6,579.7	15.9	18.2	-88.50	-88.50	286.0	564.4	344.9	313.8	31.09	11.095	
6,650.0	6,631.0	6,667.4	6,627.7	15.9	18.3	-87.60	-87.60	276.5	564.4	345.1	313.8	31.24	11.046	
6,700.0	6,680.4	6,716.0	6,674.7	16.0	18.3	-86.71	-86.71	264.1	564.4	345.3	314.0	31.36	11.013	
6,750.0	6,729.2	6,764.3	6,720.5	16.0	18.3	-85.85	-85.85	248.8	564.4	345.7	314.2	31.44	10.994	
6,800.0	6,777.3	6,812.3	6,765.0	16.0	18.3	-85.00	-85.00	230.8	564.4	346.1	314.6	31.50	10.989	
6,850.0	6,824.3	6,860.0	6,808.0	16.0	18.3	-84.18	-84.18	210.2	564.4	346.6	315.1	31.52	10.995	
6,900.0	6,870.1	6,907.4	6,849.4	16.0	18.3	-83.38	-83.38	187.1	564.4	347.1	315.6	31.53	11.010	
6,950.0	6,914.5	6,954.6	6,889.1	16.0	18.3	-82.62	-82.62	161.6	564.4	347.7	316.2	31.52	11.032	
7,000.0	6,957.2	7,000.0	6,925.7	16.0	18.2	-81.91	-81.91	134.7	564.4	348.3	316.8	31.50	11.057	
7,050.0	6,998.3	7,048.2	6,962.7	16.0	18.2	-81.20	-81.20	104.0	564.4	348.9	317.4	31.49	11.081	
7,100.0	7,037.3	7,094.6	6,996.6	16.0	18.2	-80.54	-80.54	72.1	564.4	349.6	318.1	31.49	11.100	
7,150.0	7,074.2	7,140.9	7,028.2	16.0	18.2	-79.93	-79.93	38.5	564.4	350.2	318.7	31.52	11.111	
7,200.0	7,108.9	7,186.9	7,057.7	16.0	18.2	-79.35	-79.35	3.1	564.4	350.8	319.3	31.59	11.107	
7,250.0	7,141.1	7,232.8	7,084.9	16.0	18.3	-78.82	-78.82	-33.9	564.4	351.5	319.8	31.71	11.085	
7,300.0	7,170.7	7,278.5	7,109.8	16.0	18.3	-78.34	-78.34	-72.3	564.4	352.1	320.2	31.89	11.040	
7,350.0	7,197.7	7,324.1	7,132.2	16.1	18.4	-77.90	-77.90	-112.0	564.4	352.6	320.5	32.14	10.972	
7,400.0	7,221.8	7,369.6	7,152.2	16.3	18.4	-77.51	-77.51	-152.8	564.4	353.1	320.7	32.47	10.876	
7,450.0	7,243.0	7,414.9	7,169.6	16.5	18.6	-77.17	-77.17	-194.6	564.4	353.6	320.7	32.89	10.751	
7,500.0	7,261.2	7,460.2	7,184.6	16.8	18.8	-76.88	-76.88	-237.3	564.4	354.0	320.6	33.41	10.598	
7,550.0	7,276.3	7,505.4	7,196.9	17.2	19.0	-76.64	-76.64	-280.8	564.4	354.4	320.3	34.02	10.418	
7,600.0	7,288.3	7,550.0	7,206.6	17.6	19.2	-76.45	-76.45	-324.3	564.4	354.6	319.9	34.72	10.215	
7,650.0	7,297.1	7,595.6	7,213.8	18.0	19.6	-76.31	-76.31	-369.3	564.4	354.9	319.3	35.53	9.988	
7,700.0	7,302.6	7,640.6	7,218.3	18.4	19.9	-76.22	-76.22	-414.1	564.4	355.0	318.6	36.42	9.747	
7,750.0	7,304.9	7,685.6	7,220.2	18.9	20.3	-76.19	-76.19	-459.1	564.4	355.0	317.6	37.39	9.495	
7,765.6	7,305.0	7,699.8	7,220.2	19.1	20.4	-76.19	-76.19	-473.3	564.4	355.0	317.3	37.71	9.415	
7,800.0	7,304.7	7,734.2	7,220.0	19.5	20.8	-76.20	-76.20	-507.7	564.4	355.0	316.6	38.44	9.237	
7,900.0	7,304.0	7,834.2	7,219.5	20.6	21.8	-76.24	-76.24	-607.7	564.4	355.0	314.3	40.66	8.729	
8,000.0	7,303.2	7,934.2	7,219.0	21.9	23.0	-76.28	-76.28	-707.7	564.4	354.9	311.8	43.11	8.233	
8,100.0	7,302.5	8,034.2	7,218.5	23.2	24.3	-76.31	-76.31	-807.7	564.4	354.8	309.1	45.73	7.760	
8,200.0	7,301.7	8,134.2	7,218.0	24.6	25.6	-76.35	-76.35	-907.7	564.4	354.8	306.3	48.50	7.315	
8,300.0	7,301.0	8,234.2	7,217.5	26.1	27.1	-76.39	-76.39	-1,007.7	564.4	354.7	303.3	51.40	6.902	
8,400.0	7,300.2	8,334.2	7,217.0	27.6	28.5	-76.43	-76.43	-1,107.7	564.4	354.7	300.3	54.40	6.520	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-223 - Wellbore #1 - Plan #1 (5-13-13)												Offset Site Error: 0.0 ft	
Survey Program: 0-MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)					
8,500.0	7,299.5	8,434.2	7,216.5	29.2	30.1	-76.47	-1,207.7	564.4	354.6	297.1	57.49	6.168	
8,600.0	7,298.7	8,534.2	7,216.0	30.8	31.7	-76.51	-1,307.7	564.4	354.5	293.9	60.66	5.844	
8,700.0	7,298.0	8,634.2	7,215.5	32.5	33.3	-76.54	-1,407.7	564.4	354.5	290.6	63.90	5.547	
8,800.0	7,297.2	8,734.2	7,215.0	34.2	34.9	-76.58	-1,507.7	564.4	354.4	287.2	67.19	5.275	
8,900.0	7,296.5	8,834.2	7,214.5	35.9	36.6	-76.62	-1,607.7	564.4	354.4	283.8	70.53	5.024	
9,000.0	7,295.7	8,934.2	7,213.9	37.6	38.3	-76.66	-1,707.6	564.4	354.3	280.4	73.91	4.794	
9,100.0	7,295.0	9,034.2	7,213.4	39.4	40.0	-76.70	-1,807.6	564.4	354.3	276.9	77.33	4.581	
9,200.0	7,294.2	9,134.2	7,212.9	41.1	41.7	-76.74	-1,907.6	564.4	354.2	273.4	80.78	4.385	
9,300.0	7,293.5	9,234.2	7,212.4	42.9	43.5	-76.77	-2,007.6	564.4	354.1	269.9	84.26	4.203	
9,400.0	7,292.7	9,334.2	7,211.9	44.7	45.2	-76.81	-2,107.6	564.4	354.1	266.3	87.76	4.035	
9,500.0	7,292.0	9,434.2	7,211.4	46.5	47.0	-76.85	-2,207.6	564.4	354.0	262.7	91.29	3.878	
9,600.0	7,291.2	9,534.2	7,210.9	48.3	48.8	-76.89	-2,307.6	564.4	354.0	259.1	94.83	3.733	
9,700.0	7,290.4	9,634.2	7,210.4	50.1	50.6	-76.93	-2,407.6	564.4	353.9	255.5	98.40	3.597	
9,800.0	7,289.7	9,734.2	7,209.9	51.9	52.4	-76.97	-2,507.6	564.4	353.9	251.9	101.98	3.470	
9,900.0	7,288.9	9,834.2	7,209.4	53.8	54.2	-77.00	-2,607.6	564.4	353.8	248.2	105.57	3.351	
10,000.0	7,288.2	9,934.2	7,208.9	55.6	56.0	-77.04	-2,707.6	564.4	353.7	244.6	109.18	3.240	
10,100.0	7,287.4	10,034.2	7,208.4	57.4	57.8	-77.08	-2,807.6	564.4	353.7	240.9	112.80	3.136	
10,200.0	7,286.7	10,134.2	7,207.9	59.3	59.7	-77.12	-2,907.6	564.4	353.6	237.2	116.43	3.037	
10,300.0	7,285.9	10,234.2	7,207.4	61.1	61.5	-77.16	-3,007.6	564.4	353.6	233.5	120.07	2.945	
10,400.0	7,285.2	10,334.2	7,206.9	63.0	63.4	-77.20	-3,107.6	564.4	353.5	229.8	123.72	2.858	
10,500.0	7,284.4	10,434.2	7,206.4	64.8	65.2	-77.24	-3,207.6	564.4	353.5	226.1	127.37	2.775	
10,600.0	7,283.7	10,534.2	7,205.8	66.7	67.1	-77.27	-3,307.6	564.4	353.4	222.4	131.04	2.697	
10,700.0	7,282.9	10,634.2	7,205.3	68.6	68.9	-77.31	-3,407.6	564.3	353.4	218.6	134.71	2.623	
10,800.0	7,282.2	10,734.2	7,204.8	70.4	70.8	-77.35	-3,507.6	564.3	353.3	214.9	138.39	2.553	
10,900.0	7,281.4	10,834.2	7,204.3	72.3	72.6	-77.39	-3,607.6	564.3	353.2	211.2	142.08	2.486	
11,000.0	7,280.7	10,934.2	7,203.8	74.2	74.5	-77.43	-3,707.6	564.3	353.2	207.4	145.77	2.423	
11,100.0	7,279.9	11,034.2	7,203.3	76.1	76.4	-77.47	-3,807.6	564.3	353.1	203.7	149.47	2.363	
11,200.0	7,279.2	11,134.2	7,202.8	78.0	78.2	-77.51	-3,907.6	564.3	353.1	199.9	153.17	2.305	
11,300.0	7,278.4	11,234.2	7,202.3	79.8	80.1	-77.55	-4,007.6	564.3	353.0	196.2	156.88	2.250	
11,400.0	7,277.7	11,334.2	7,201.8	81.7	82.0	-77.58	-4,107.6	564.3	353.0	192.4	160.59	2.198	
11,500.0	7,276.9	11,434.2	7,201.3	83.6	83.9	-77.62	-4,207.6	564.3	352.9	188.6	164.31	2.148	
11,600.0	7,276.2	11,534.2	7,200.8	85.5	85.7	-77.66	-4,307.6	564.3	352.9	184.8	168.03	2.100	
11,700.0	7,275.4	11,634.2	7,200.3	87.4	87.6	-77.70	-4,407.6	564.3	352.8	181.1	171.75	2.054	
11,744.6	7,275.1	11,678.8	7,200.1	88.2	88.5	-77.72	-4,452.3	564.3	352.8	179.4	173.42	2.034	
11,758.6	7,275.0	11,689.5	7,200.0	88.5	88.7	-77.72	-4,462.9	564.3	352.8	178.9	173.87	2.029 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-403 - Wellbore #1 - Plan #1 (5-13-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.02	-90.02	0.0	-30.6	30.6				
100.0	100.0	100.0	100.0	0.1	0.1	-90.02	-90.02	0.0	-30.6	30.6	30.4	0.22	136.030	
200.0	200.0	200.0	200.0	0.3	0.3	-90.02	-90.02	0.0	-30.6	30.6	29.9	0.67	45.343	
300.0	300.0	300.0	300.0	0.6	0.6	-90.02	-90.02	0.0	-30.6	30.6	29.5	1.12	27.206	
400.0	400.0	400.0	400.0	0.8	0.8	-90.02	-90.02	0.0	-30.6	30.6	29.0	1.57	19.433	
500.0	500.0	500.0	500.0	1.0	1.0	-90.02	-90.02	0.0	-30.6	30.6	28.6	2.02	15.114	
600.0	600.0	600.0	600.0	1.2	1.2	-90.02	-90.02	0.0	-30.6	30.6	28.1	2.47	12.366	
700.0	700.0	700.0	700.0	1.5	1.5	-90.02	-90.02	0.0	-30.6	30.6	27.7	2.92	10.464	
800.0	800.0	800.0	800.0	1.7	1.7	-90.02	-90.02	0.0	-30.6	30.6	27.2	3.37	9.069	
900.0	900.0	900.0	900.0	1.9	1.9	-90.02	-90.02	0.0	-30.6	30.6	26.8	3.82	8.002	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.02	-90.02	0.0	-30.6	30.6	26.3	4.27	7.159	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.02	-90.02	0.0	-30.6	30.6	25.9	4.72	6.478	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.02	-90.02	0.0	-30.6	30.6	25.4	5.17	5.914 CC, ES	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-129.11	-129.11	0.0	-30.6	31.6	26.0	5.61	5.636	
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	-135.69	-135.69	0.0	-30.6	35.2	29.1	6.05	5.811	
1,500.6	1,500.1	1,500.1	1,500.1	3.3	3.3	-144.01	-144.01	0.0	-30.6	41.9	35.4	6.49	6.457	
1,600.0	1,598.9	1,598.9	1,598.9	3.5	3.5	-150.93	-150.93	0.0	-30.6	50.7	43.8	6.93	7.316	
1,700.0	1,698.4	1,698.4	1,698.4	3.7	3.7	-155.78	-155.78	0.0	-30.6	60.1	52.7	7.38	8.145	
1,800.0	1,797.8	1,797.8	1,797.8	4.0	3.9	-159.31	-159.31	0.0	-30.6	69.8	62.0	7.83	8.917	
1,900.0	1,897.3	1,897.3	1,897.3	4.2	4.2	-161.97	-161.97	0.0	-30.6	79.7	71.4	8.28	9.628	
2,000.0	1,996.7	1,996.7	1,996.7	4.5	4.4	-164.04	-164.04	0.0	-30.6	89.7	81.0	8.73	10.280	
2,100.0	2,096.2	2,097.9	2,097.9	4.8	4.6	-164.89	-164.89	1.6	-30.8	99.0	89.8	9.18	10.780	
2,200.0	2,195.6	2,199.5	2,199.3	5.0	4.8	-163.95	-163.95	6.9	-31.5	106.5	96.8	9.64	11.043	
2,300.0	2,295.1	2,300.4	2,299.9	5.3	5.1	-161.65	-161.65	15.4	-32.6	112.4	102.3	10.10	11.123	
2,400.0	2,394.5	2,400.1	2,399.1	5.6	5.3	-159.30	-159.30	24.4	-33.8	118.2	107.6	10.57	11.176	
2,500.0	2,494.0	2,499.8	2,498.4	5.9	5.5	-157.18	-157.18	33.5	-35.0	124.1	113.1	11.05	11.233	
2,600.0	2,593.4	2,599.5	2,597.7	6.1	5.8	-155.25	-155.25	42.6	-36.2	130.3	118.7	11.53	11.293	
2,700.0	2,692.8	2,699.3	2,697.0	6.4	6.0	-153.49	-153.49	51.7	-37.4	136.5	124.5	12.02	11.353	
2,800.0	2,792.3	2,799.0	2,796.3	6.7	6.2	-151.89	-151.89	60.8	-38.6	142.9	130.4	12.52	11.413	
2,900.0	2,891.7	2,898.7	2,895.6	7.0	6.5	-150.43	-150.43	69.8	-39.8	149.4	136.3	13.02	11.472	
3,000.0	2,991.2	2,998.4	2,994.9	7.3	6.7	-149.09	-149.09	78.9	-40.9	155.9	142.4	13.52	11.529	
3,100.0	3,090.6	3,098.1	3,094.2	7.6	7.0	-147.86	-147.86	88.0	-42.1	162.6	148.5	14.03	11.584	
3,200.0	3,190.1	3,197.9	3,193.5	7.8	7.2	-146.73	-146.73	97.1	-43.3	169.3	154.7	14.55	11.637	
3,300.0	3,289.5	3,297.6	3,292.8	8.1	7.5	-145.68	-145.68	106.2	-44.5	176.0	161.0	15.06	11.687	
3,400.0	3,389.0	3,397.3	3,392.1	8.4	7.8	-144.71	-144.71	115.3	-45.7	182.9	167.3	15.58	11.736	
3,500.0	3,488.4	3,497.0	3,491.4	8.7	8.0	-143.81	-143.81	124.3	-46.9	189.7	173.6	16.10	11.783	
3,600.0	3,587.9	3,596.7	3,590.7	9.0	8.3	-142.97	-142.97	133.4	-48.1	196.7	180.0	16.63	11.827	
3,700.0	3,687.3	3,696.5	3,690.0	9.3	8.5	-142.19	-142.19	142.5	-49.3	203.6	186.5	17.15	11.870	
3,800.0	3,786.8	3,796.2	3,789.3	9.6	8.8	-141.47	-141.47	151.6	-50.5	210.6	192.9	17.68	11.911	
3,900.0	3,886.2	3,895.9	3,888.6	9.9	9.1	-140.78	-140.78	160.7	-51.7	217.6	199.4	18.21	11.949	
4,000.0	3,985.7	3,995.6	3,987.9	10.1	9.3	-140.15	-140.15	169.8	-52.9	224.7	205.9	18.74	11.987	
4,100.0	4,085.1	4,095.4	4,087.2	10.4	9.6	-139.55	-139.55	178.8	-54.1	231.7	212.5	19.28	12.022	
4,200.0	4,184.6	4,195.1	4,186.5	10.7	9.9	-138.98	-138.98	187.9	-55.3	238.8	219.0	19.81	12.056	
4,300.0	4,284.0	4,294.8	4,285.8	11.0	10.1	-138.45	-138.45	197.0	-56.5	246.0	225.6	20.35	12.089	
4,400.0	4,383.5	4,394.5	4,385.1	11.3	10.4	-137.95	-137.95	206.1	-57.7	253.1	232.2	20.88	12.120	
4,500.0	4,482.9	4,494.2	4,484.4	11.6	10.7	-137.47	-137.47	215.2	-58.9	260.3	238.8	21.42	12.150	
4,600.0	4,582.4	4,594.0	4,583.7	11.9	10.9	-137.03	-137.03	224.2	-60.0	267.4	245.5	21.96	12.178	
4,700.0	4,681.8	4,693.7	4,683.0	12.2	11.2	-136.60	-136.60	233.3	-61.2	274.6	252.1	22.50	12.206	
4,718.2	4,699.9	4,711.8	4,701.1	12.2	11.2	-136.53	-136.53	235.0	-61.5	275.9	253.3	22.60	12.211	
4,800.0	4,781.4	4,793.4	4,782.4	12.4	11.5	-136.10	-136.10	242.4	-62.4	281.0	258.0	23.03	12.201	
4,900.0	4,881.2	4,893.2	4,881.7	12.6	11.7	-135.13	-135.13	251.5	-63.6	285.0	261.4	23.52	12.114	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

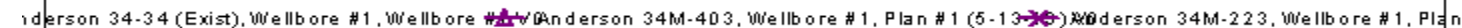
Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-403 - Wellbore #1 - Plan #1 (5-13-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,981.2	4,992.9	4,981.0	12.8	12.0	-133.66		260.6	-64.8	286.6	262.6	24.00	11.941	
5,018.8	5,000.0	5,011.7	4,999.7	12.8	12.0	-96.75		262.3	-65.0	286.6	262.5	24.09	11.899	
5,100.0	5,081.2	5,092.5	5,080.2	13.0	12.3	-95.27		269.6	-66.0	286.8	262.3	24.49	11.711	
5,200.0	5,181.2	5,192.1	5,179.3	13.2	12.5	-93.45		278.7	-67.2	287.3	262.3	25.00	11.492	
5,300.0	5,281.2	5,292.1	5,278.9	13.3	12.8	-91.69		287.5	-68.4	288.1	262.6	25.50	11.299	
5,400.0	5,381.2	5,393.1	5,379.7	13.5	13.0	-90.50		293.5	-69.1	288.8	262.8	25.92	11.140	
5,500.0	5,481.2	5,494.3	5,480.9	13.7	13.2	-90.01		295.9	-69.5	289.1	262.8	26.31	10.989	
5,600.0	5,581.2	5,594.6	5,581.2	13.9	13.3	-90.00		296.0	-69.5	289.1	262.4	26.68	10.833	
5,700.0	5,681.2	5,694.6	5,681.2	14.1	13.5	-90.00		296.0	-69.5	289.1	262.0	27.09	10.672	
5,800.0	5,781.2	5,794.6	5,781.2	14.3	13.8	-90.00		296.0	-69.5	289.1	261.6	27.49	10.514	
5,900.0	5,881.2	5,894.6	5,881.2	14.5	14.0	-90.00		296.0	-69.5	289.1	261.2	27.90	10.361	
6,000.0	5,981.2	5,994.6	5,981.2	14.7	14.2	-90.00		296.0	-69.5	289.1	260.8	28.31	10.211	
6,100.0	6,081.2	6,094.6	6,081.2	14.9	14.4	-90.00		296.0	-69.5	289.1	260.4	28.72	10.066	
6,200.0	6,181.2	6,194.6	6,181.2	15.1	14.6	-90.00		296.0	-69.5	289.1	259.9	29.13	9.924	
6,300.0	6,281.2	6,294.6	6,281.2	15.3	14.8	-90.00		296.0	-69.5	289.1	259.5	29.54	9.786	
6,400.0	6,381.2	6,394.6	6,381.2	15.5	15.0	-90.00		296.0	-69.5	289.1	259.1	29.95	9.651	
6,500.0	6,481.2	6,494.6	6,481.2	15.7	15.2	-90.00		296.0	-69.5	289.1	258.7	30.37	9.519	
6,559.8	6,541.0	6,554.4	6,541.0	15.8	15.3	-90.00		296.0	-69.5	289.1	258.5	30.62	9.442	
6,567.9	6,549.1	6,562.5	6,549.1	15.8	15.3	90.01		296.0	-69.5	289.1	258.4	30.65	9.432	
6,600.0	6,581.2	6,594.5	6,581.2	15.9	15.4	90.21		296.0	-69.5	289.1	258.3	30.77	9.394	
6,650.0	6,631.0	6,644.4	6,631.0	15.9	15.5	91.04		296.0	-69.5	289.1	258.2	30.95	9.342	
6,700.0	6,680.4	6,693.8	6,680.4	16.0	15.6	92.49		296.0	-69.5	289.4	258.2	31.12	9.299	
6,750.0	6,729.2	6,742.6	6,729.2	16.0	15.7	94.51		296.0	-69.5	290.0	258.8	31.27	9.276	
6,800.0	6,777.3	6,790.6	6,777.3	16.0	15.8	97.02		296.0	-69.5	291.5	260.1	31.40	9.284	
6,850.0	6,824.3	6,837.6	6,824.3	16.0	15.9	99.92		296.0	-69.5	294.2	262.7	31.49	9.342	
6,900.0	6,870.1	6,883.4	6,870.1	16.0	16.0	103.09		296.0	-69.5	298.5	267.0	31.52	9.470	
6,950.0	6,914.5	6,927.8	6,914.5	16.0	16.1	106.39		296.0	-69.5	305.1	273.6	31.49	9.686	
7,000.0	6,957.2	6,970.6	6,957.2	16.0	16.2	109.68		296.0	-69.5	314.3	282.9	31.39	10.012	
7,050.0	6,998.3	7,011.6	6,998.3	16.0	16.3	112.83		296.0	-69.5	326.6	295.4	31.21	10.465	
7,100.0	7,037.3	7,050.7	7,037.3	16.0	16.4	115.72		296.0	-69.5	342.2	311.2	30.96	11.054	
7,150.0	7,074.2	7,087.6	7,074.2	16.0	16.4	118.24		296.0	-69.5	361.4	330.7	30.66	11.786	
7,200.0	7,108.9	7,126.5	7,113.2	16.0	16.5	120.79		295.9	-69.5	384.0	353.7	30.30	12.674	
7,250.0	7,141.1	7,179.4	7,166.0	16.0	16.6	124.41		293.1	-69.5	409.0	379.3	29.73	13.757	
7,300.0	7,170.7	7,237.0	7,223.1	16.0	16.7	127.92		286.0	-69.5	435.4	406.4	29.06	14.984	
7,350.0	7,197.7	7,300.4	7,285.2	16.1	16.7	131.36		273.3	-69.5	462.9	434.6	28.30	16.354	
7,400.0	7,221.8	7,371.3	7,353.0	16.3	16.7	134.77		252.9	-69.5	490.7	463.3	27.47	17.864	
7,450.0	7,243.0	7,451.6	7,427.3	16.5	16.7	138.15		222.4	-69.5	518.5	491.9	26.59	19.501	
7,500.0	7,261.2	7,544.0	7,508.2	16.8	16.7	141.49		177.9	-69.5	545.4	519.7	25.69	21.230	
7,550.0	7,276.3	7,651.8	7,595.0	17.2	16.8	144.70		114.1	-69.5	570.6	545.8	24.85	22.963	
7,600.0	7,288.3	7,778.2	7,684.1	17.6	16.9	147.66		24.6	-69.5	593.0	568.9	24.18	24.528	
7,650.0	7,297.1	7,925.9	7,767.9	18.0	17.3	150.13		-96.7	-69.5	611.3	587.5	23.84	25.647	
7,700.0	7,302.6	8,094.1	7,832.8	18.4	18.1	151.88		-251.5	-69.5	623.9	599.9	24.01	25.982	
7,750.0	7,304.9	8,245.2	7,861.2	18.9	19.3	152.57		-399.6	-69.5	629.6	604.9	24.73	25.454	
7,765.6	7,305.0	8,260.7	7,862.8	19.1	19.4	152.59		-415.0	-69.5	631.0	606.1	24.92	25.319	
7,800.0	7,304.7	8,294.9	7,866.4	19.5	19.7	152.75		-449.1	-69.5	634.4	609.2	25.25	25.127	
7,900.0	7,304.0	8,480.5	7,872.8	20.6	21.7	153.07		-634.4	-69.5	638.6	611.7	26.85	23.786	
8,000.0	7,303.2	8,628.3	7,857.5	21.9	23.6	152.48		-781.3	-69.5	629.4	600.7	28.76	21.885	
8,100.0	7,302.5	8,727.5	7,844.5	23.2	24.9	151.95		-879.7	-69.5	618.5	588.0	30.47	20.301	
8,200.0	7,301.7	8,826.8	7,831.5	24.6	26.3	151.40		-978.1	-69.5	607.6	575.3	32.30	18.812	
8,300.0	7,301.0	8,926.0	7,818.5	26.1	27.8	150.84		-1,076.5	-69.5	596.8	562.5	34.25	17.425	
8,400.0	7,300.2	9,025.2	7,805.5	27.6	29.3	150.25		-1,174.9	-69.5	586.0	549.7	36.31	16.137	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-403 - Wellbore #1 - Plan #1 (5-13-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,500.0	7,299.5	9,124.5	7,792.5	29.2	30.9	149.64		-1,273.2	-69.5	575.3	536.8	38.48	14.948	
8,600.0	7,298.7	9,223.7	7,779.5	30.8	32.5	149.01		-1,371.6	-69.5	564.6	523.8	40.76	13.851	
8,700.0	7,298.0	9,322.9	7,766.5	32.5	34.1	148.35		-1,470.0	-69.5	554.0	510.9	43.15	12.841	
8,800.0	7,297.2	9,422.2	7,753.5	34.2	35.8	147.67		-1,568.4	-69.5	543.5	497.9	45.63	11.911	
8,900.0	7,296.5	9,521.4	7,740.5	35.9	37.4	146.96		-1,666.7	-69.5	533.1	484.9	48.22	11.055	
9,000.0	7,295.7	9,620.6	7,727.5	37.6	39.1	146.22		-1,765.1	-69.5	522.8	471.8	50.92	10.267	
9,100.0	7,295.0	9,719.9	7,714.5	39.4	40.9	145.46		-1,863.5	-69.5	512.5	458.8	53.71	9.541	
9,200.0	7,294.2	9,819.1	7,701.5	41.1	42.6	144.66		-1,961.9	-69.5	502.4	445.7	56.62	8.873	
9,300.0	7,293.5	9,918.3	7,688.5	42.9	44.3	143.83		-2,060.3	-69.5	492.3	432.7	59.63	8.256	
9,400.0	7,292.7	10,017.6	7,675.5	44.7	46.1	142.97		-2,158.6	-69.5	482.4	419.6	62.75	7.686	
9,500.0	7,292.0	10,116.8	7,662.5	46.5	47.8	142.07		-2,257.0	-69.5	472.5	406.5	65.99	7.160	
9,600.0	7,291.2	10,216.0	7,649.5	48.3	49.6	141.13		-2,355.4	-69.5	462.8	393.5	69.34	6.674	
9,700.0	7,290.4	10,315.3	7,636.5	50.1	51.4	140.15		-2,453.8	-69.5	453.2	380.4	72.82	6.224	
9,800.0	7,289.7	10,414.5	7,623.5	51.9	53.2	139.13		-2,552.2	-69.5	443.8	367.4	76.41	5.808	
9,900.0	7,288.9	10,513.7	7,610.5	53.8	55.0	138.07		-2,650.5	-69.5	434.5	354.3	80.13	5.422	
10,000.0	7,288.2	10,613.0	7,597.5	55.6	56.8	136.96		-2,748.9	-69.5	425.3	341.4	83.98	5.065	
10,100.0	7,287.4	10,712.2	7,584.5	57.4	58.6	135.80		-2,847.3	-69.5	416.4	328.4	87.96	4.734	
10,200.0	7,286.7	10,811.4	7,571.5	59.3	60.4	134.60		-2,945.7	-69.5	407.6	315.5	92.07	4.427	
10,300.0	7,285.9	10,910.7	7,558.5	61.1	62.2	133.34		-3,044.0	-69.5	398.9	302.6	96.32	4.142	
10,400.0	7,285.2	11,009.9	7,545.5	63.0	64.0	132.02		-3,142.4	-69.5	390.5	289.8	100.70	3.878	
10,500.0	7,284.4	11,109.1	7,532.5	64.8	65.9	130.65		-3,240.8	-69.5	382.3	277.1	105.21	3.634	
10,600.0	7,283.7	11,208.4	7,519.5	66.7	67.7	129.23		-3,339.2	-69.5	374.4	264.5	109.86	3.408	
10,700.0	7,282.9	11,307.6	7,506.5	68.6	69.5	127.74		-3,437.6	-69.5	366.6	252.0	114.63	3.198	
10,800.0	7,282.2	11,406.8	7,493.5	70.4	71.4	126.19		-3,535.9	-69.5	359.2	239.6	119.53	3.005	
10,900.0	7,281.4	11,506.1	7,480.5	72.3	73.2	124.57		-3,634.3	-69.5	352.0	227.4	124.55	2.826	
11,000.0	7,280.7	11,605.3	7,467.5	74.2	75.0	122.89		-3,732.7	-69.5	345.1	215.4	129.67	2.661	
11,100.0	7,279.9	11,704.5	7,454.5	76.1	76.9	121.14		-3,831.1	-69.5	338.5	203.6	134.90	2.509	
11,200.0	7,279.2	11,803.8	7,441.5	78.0	78.7	119.33		-3,929.4	-69.5	332.2	192.0	140.20	2.370	
11,300.0	7,278.4	11,903.0	7,428.5	79.8	80.6	117.45		-4,027.8	-69.5	326.3	180.7	145.58	2.242	
11,400.0	7,277.7	12,002.2	7,415.5	81.7	82.4	115.50		-4,126.2	-69.5	320.8	169.8	150.99	2.124	
11,500.0	7,276.9	12,101.5	7,402.5	83.6	84.3	113.49		-4,224.6	-69.5	315.6	159.2	156.43	2.018	
11,600.0	7,276.2	12,200.7	7,389.5	85.5	86.1	111.41		-4,323.0	-69.5	310.9	149.0	161.87	1.921	
11,700.0	7,275.4	12,299.9	7,376.5	87.4	88.0	109.28		-4,421.3	-69.5	306.5	139.3	167.27	1.833	
11,758.6	7,275.0	12,349.2	7,370.0	88.5	88.9	108.19		-4,470.2	-69.5	304.3	134.3	170.09	1.789 SF	

Reference Depths are relative to WELL @ 4930.0ft (RKB - 15')	Coordinates are relative to: Anderson 34M-303
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.47°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-303
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (RKB - 15')
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-303	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4930.0ft (RKB - 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Anderson 34M-303
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.47°

